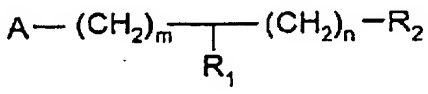
Amendments to the Claims

Please amend the listing of claims as follows:

1. (Original) A compound of structural formula (I):



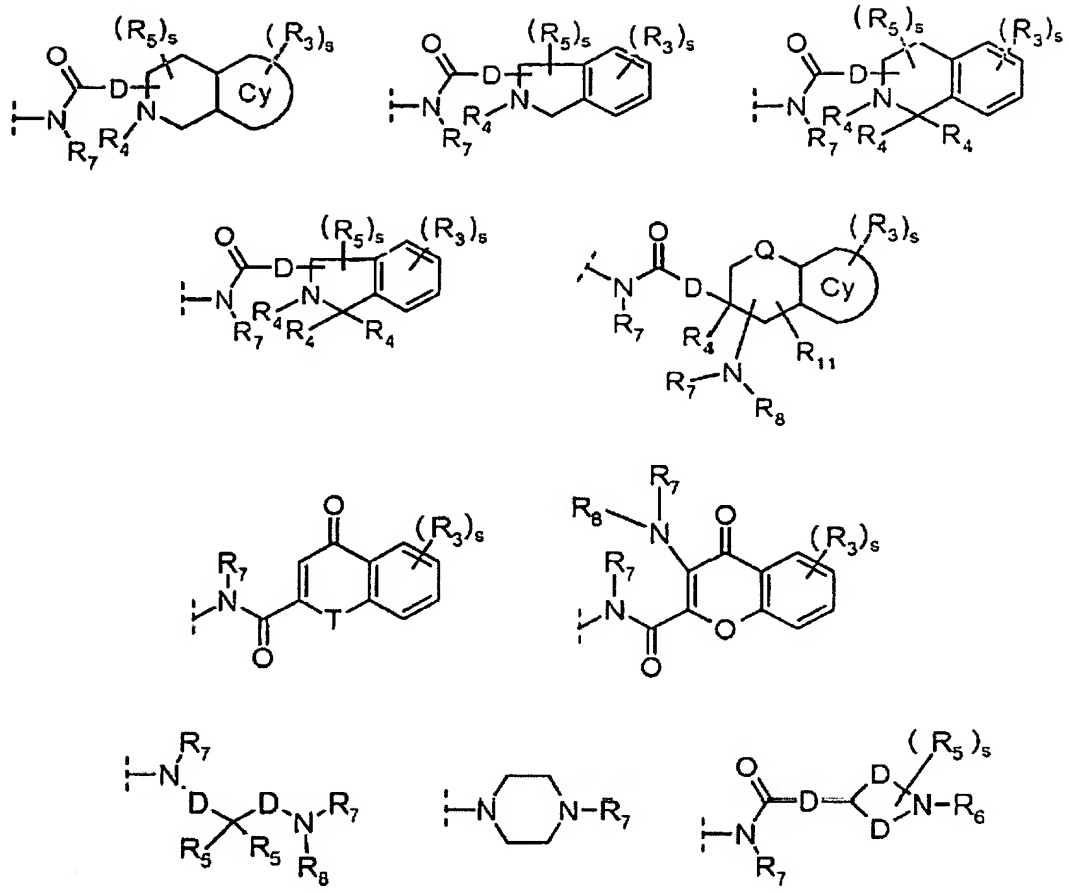
(I)

or a pharmaceutically acceptable salt or a solvate thereof, wherein

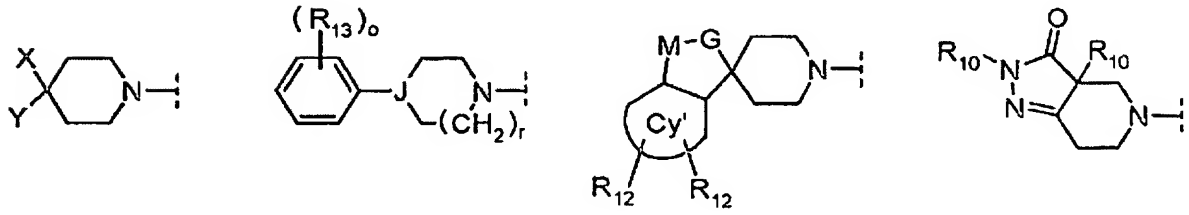
R_1 is:

(D)-aryl or (D)-heteroaryl,
wherein aryl and heteroaryl are unsubstituted or substituted;

R_2 is:



A is:



each R_3 is independently:

hydrogen,

halo,

alkyl ,

haloalkyl,

hydroxy,

alkoxy,

S-alkyl,

SO_2-alkyl,

O-alkenyl,

S-alkenyl,

$NR_{15}C(O)R_{15}$,

$NR_{15}SO_2R_{15}$,

$N(R_{15})_2$,

(D)-cycloalkyl,

(D)-aryl (wherein aryl is phenyl or naphthyl),

(D)-heteroaryl,

(D)-heterocyclyl (wherein heterocyclyl excludes a heterocyclyl containing a single nitrogen), and

wherein aryl, heteroaryl, heterocyclyl, alkyl and cycloalkyl is unsubstituted or substituted, and two adjacent R_3 may form a 4- to 7-membered ring;

each R_4 is independently:

hydrogen,

alkyl,

C(O)-alkyl,

SO_2alkyl,

SO_2aryl,

(D)-aryl or

(D)-cycloalkyl;

each R_5 is independently:

hydrogen,

alkyl,

(D)-aryl,

(D)-heteroaryl,

(D)-$N(R_7)_2$,

(D)-$NR_7C(O)$-alkyl,

(D)-NR_7SO_2-alkyl,

(D)-$SO_2N(R_7)_2$,

(D)-$(O)_q$-alkyl,

(D)-$(O)_q$(D)-NR_7COR_7,

(D)-$(O)_q$(D)- $NR_7SO_2R_7$,

(D)-$(O)_q$-heterocyclyl or

(D)-$(O)_q$(alkyl)-heterocyclyl;

each R_6 is independently:

hydrogen,

alkyl,

(D)-phenyl,

C(O)-alkyl,

C(O)-phenyl,

SO_2-alkyl or

SO_2-phenyl;

R_7 and R_8 are each independently:

hydrogen,

alkyl or

(D)-cycloalkyl, or

R_7 and R_8 together with the nitrogen to which they are attached form a 5- to 8-membered ring optionally containing an additional heteroatom selected from O, S and NR_4,

wherein alkyl and cycloalkyl are unsubstituted or substituted;

R_{10} is independently:

hydrogen,

alkyl,

(D)-aryl or

(D)-cycloalkyl;

R_{11} is:

hydrogen or

alkyl;

R_{12} is:

hydrogen,

halo,

alkyl,

alkoxy,

C≡N,

CF_3 or

OCF_3;

R_{13} is independently:

hydrogen,

hydroxy,

cyano,

nitro,

halo,

alkyl,

alkoxy,

haloalkyl,

(D)-$C(O)_{15}$,

(D)-$C(O)_{15}$,

(D)-$C(O)SR_{15}$,

(D)-C(O)-heteroaryl,

(D)-C(O)-heterocyclyl,

(D)-$C(O)N(R_{15})_2$,

(D)-$N(R_{15})_2$,

(D)-$NR_{15}COR_{15}$,

(D)-$NR_{15}CON(R_{15})_2$,

(D)-$NR_{15}C(O)OR_{15}$,

(D)-$NR_{15}C(R_{15})=N(R_{15})$,

(D)-$NR_{15}C(=NR_{15})N(R_{15})_2$,

(D)-$NR_{15}SO_2R_{15}$,

(D)-$NR_{15}SO_2N(R_{15})_2$,

(D)-NR_{15}(D)-heterocyclyl,

(D)-NR_{15}(D)-heteroaryl,

(D)-OR_{15},

OSO_2R_{15},

(D)-$[O]_q$(cycloalkyl),

(D)-$[O]_q$(D)-aryl,

(D)-$[O]_q$(D)-heteroaryl,

(D)-$[O]_q$(D)-heterocyclyl (wherein heterocyclyl excludes a heterocyclyl containing a single nitrogen when q=1),

(D)-SR_{15},

(D)-SOR_{15},

(D)-SO_2R_{15} or

(D)-$SO_2N(R_{15})_2$,

wherein alkyl, alkoxy, cycloalkyl, aryl, heterocyclyl and heteroaryl are unsubstituted or substituted;

each R_{15} is independently:

hydrogen,

alkyl,

haloalkyl,

(D)-cycloalkyl,

(D)-aryl (wherein aryl is phenyl or naphthyl),

(D)-heteroaryl,

(D)-heterocyclyl (wherein heterocyclyl excludes a heterocyclyl containing a single nitrogen), and

wherein aryl, heteroaryl, heterocyclyl, alkyl and cycloalkyl is unsubstituted or substituted;

R_{17} is independently:

R_{10} or

(D)-heterocyclyl;

R_{18} is independently:

R_{10},

(D)-heteroaryl,

(D)-heterocyclyl,

(D)-$N(Y)_2$,

(D)-NH-heteroaryl or

(D)-NH-heterocyclyl,

wherein aryl, heteroaryl, alkyl, D, cycloalkyl and heterocyclyl are unsubstituted or substituted, or

two R_{18} groups together with the atoms to which they are attached form a 5- to 8-membered mono- or bi-cyclic ring system optionally containing an additional heteroatom selected from O, S, NR_{10}, NBoc and NZ;

Cy is:

aryl,

5- or 6-membered heteroaryl,

5- or 6-membered heterocyclyl or

5- or 7-membered carbocyclyl;

Cy' is:

benzene,

pyridine or

cyclohexane;

X is:

alkyl,

(D)-cycloalkyl,

(D)-aryl,

(D)-heteroaryl,

(D)-heterocyclyl,

(D)-C≡N,

(D)-CON($R_{17}R_{17}$),

(D)-CO_2R_{17},

(D)-COR_{17},

(D)-$NR_{17}C(O)R_{17}$,

(D)-$NR_{17}CO_2R_{17}$,

(D)-$NR_{17}C(O)N(R_{17})_2$,

(D)-$NR_{17}SO_2R_{17}$,

(D)-$S(O)_pR_{17}$,

(D)-$SO_2N(R_{17})(R_{17})$,

(D)-OR_{17},

(D)-$OC(O)R_{17}$,

(D)-$OC(O)OR_{17}$,

(D)-$OC(O)N(R_{17})_2$,

(D)-$N(R_{17})(R_{17})$ or

(D)-$NR_{17}SO_2N(R_{17})(R_{17})$,

wherein aryl, heteroaryl, alkyl, D, cycloalkyl and heterocyclyl are unsubstituted or substituted;

Y is:

hydrogen,

alkyl,

(D)-cycloalkyl,

(D)-aryl,

(D)-heterocyclyl or

(D)-heteroaryl,

wherein aryl, heteroaryl, alkyl, D and cycloalkyl are unsubstituted or substituted;

Q is a bond, O, $S(O)_u$, NR_6 or CH_2;

D is a bond or C_1 - C_4 alkyl;

E is O, S or NR_6;

G is D, CH-alkyl, O, C=O or SO_2, with the proviso that when G is O, the ring atom M is carbon;

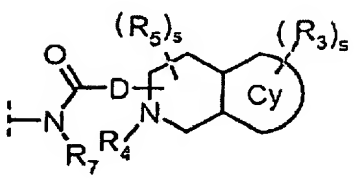
J is N or CH;

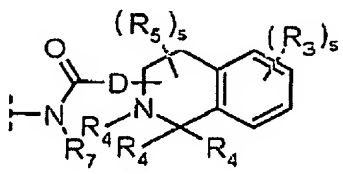
M is $CHCO_2Y$, $CHC(O)N(Y)_2$, NSO_2R_{18}, $CHN(Y)COR_{18}$, $CHN(Y)SO_2R_{18}$. $CHCH_2OY$ or $CHCH_2$heteroaryl;

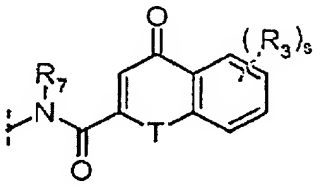
T is O or NR_7;
n is 0 - 3;
m is 1 - 3;
o is 0 - 3;
p is 0 - 2;
q is 0 or 1;
r is 1 or 2;
s is 0 - 3;
u is 0 - 2.

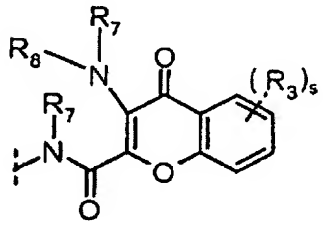
2. (Original) The compound of claim 1, wherein
R_1 is (D)-aryl which may be substituted with one to three substituents independently selected from the group consisting of cyano, nitro, perfluoroalkoxy, halo, alkyl (D)-cycloalkyl, alkoxy, hydroxy and haloalkyl;

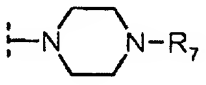
R_2 is:

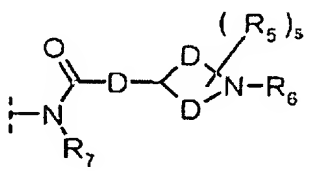












R_3 is independently:

hydrogen,

halo,

alkyl,

hydroxy,

alkoxy,

S-alkyl,

SO_2-alkyl,

O-alkenyl,

S-alkenyl,

haloalkyl or

(D)-cycloalkyl;

R_4 is:

hydrogen or

alkyl;

each R_5 is independently:

hydrogen,

alkyl,

(D)-aryl,

(D)-heteroaryl,

(D)-$N(R_7)_2$,

(D)-$NR_7C(O)$alkyl or

(D)-NR_7SO_2alkyl;

R_7 and R_8 are each independently:

hydrogen,

alkyl or

cycloalkyl, or

R_7 and R_8 together with the nitrogen to which they are attached form a 5- to 7-membered ring optionally containing an additional heteroatom selected from O, S and NR_4;

R_9 is:

alkyl,

OR_{10},

(D)-aryl,

(D)-cycloalkyl,

(D)-heteroaryl and

halo;

R_{12} is:

hydrogen,

halo,

alkyl,

alkoxy or

$C \equiv N$;

R_{13} is independently:

hydrogen,

hydroxy,

cyano,

nitro,

halo,

alkyl,

alkoxy,

haloalkyl,

(D)-C(O)-heterocyclyl,

(D)-$N(R_{15})_2$,

(D)-$NR_{15}COR_{15}$,

(D)-$NR_{15}CON(R_{15})_2$,

(D)-$NR_{15}C(O)OR_{15}$,

(D)-$NR_{15}C(R_{15})=N(R_{15})$,

(D)-$NR_{15}C(=NR_{15})N(R_{15})_2$,

(D)-$NR_{15}SO_2R_{15}$ or

(D)-$NR_{15}SO_2N(R_{15})_2$;

each R_{14} is independently:

hydrogen,

halo,

alkyl,

(D)-cycloalkyl,

alkoxy or

phenyl;

each R_{15} is independently:

hydrogen,

halo,

alkyl,

(D)-cycloalkyl,

alkoxy or

phenyl;

each R_{16} is independently:

hydrogen,

alkyl or

cycloalkyl;

X is:

alkyl,

(D)-cycloalkyl,

(D)-aryl,

(D)-heteroaryl,

(D)-heterocyclyl,

(D)-$NHC(O)R_{17}$,

(D)-CO_2R_{17} or

(D)-$CON(R_{17}R_{17})$;

Y is:

hydrogen,

alkyl,

(D)-cycloalkyl,

(D)-aryl,

(D)-heterocyclyl or

(D)-heteroaryl;

Cy is:

aryl,

5- or 6-membered heteroaryl,

5- or 6-membered heterocyclyl or

5- to 7-membered carbocyclyl;

Cy' is benzene or pyridine;

D is a bond or C_1 - C_4-alkylene;

M is NSO_2R_{18}, $CHN(Y)COR_{18}$ or $CHN(Y)SO_2R_{18}$;

G is D or CH-alkyl;

T is NR_7 or O;

n is 0 or 1 ;

m is 1 or 2;

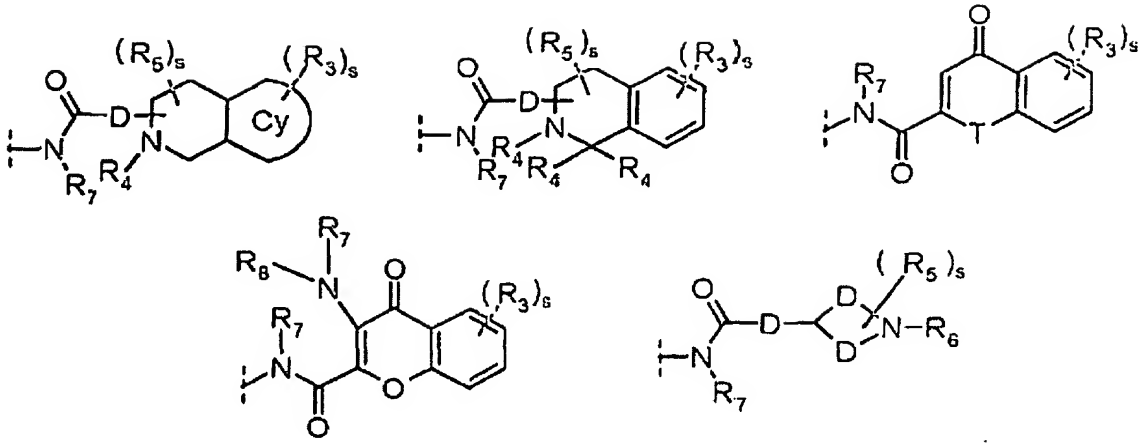
r is 1;

s is 0, 1 or 2.

3. (Currently Amended) The compound of ~~claims 1 or 2~~claim 1, wherein

R_1 is (D)-phenyl or (D)-naphthyl which may be substituted with one or two substituents independently selected from the group consisting of perfluoroalkoxy, halo, alkyl, alkoxy and haloalkyl;

R_2 is:



R_3 is hydrogen or halo;

R_4 is hydrogen;

R_5 is hydrogen;

R_7 and R_8 are each independently:

hydrogen or

alkyl, or

R_7 and R_8 together with the nitrogen to which they are attached form a 5- to 6-membered ring optionally containing an additional oxygen atom;

R_{12} is:

hydrogen,

halo or

C_1 - C_4 alkyl;

R_{13} is independently:

cyano,

nitro,

halo,

alkyl,
(D)-C(O)-heterocyclyl,
(D)-$N(R_{15})_2$,
(D)-$NR_{15}COR_{15}$,
(D)-$NR_{15}CON(R_{15})_2$,
(D)-$NR_{15}C(O)OR_{15}$ or
(D)-$NR_{15}SO_2R_{15}$;

each R_{14} is independently:
hydrogen,
halo,
alkyl,
alkoxy or
phenyl;

each R_{15} is independently:
hydrogen,
halo,
alkyl,
alkoxy or
phenyl;

X is:
alkyl,
(D)-cycloalkyl,
(D)-heterocyclyl,
(D)-$NHC(O)R_{17}$ or
(D)-$CON(R_{17}R_{17})$;

Y is:
hydrogen,
alkyl,
(D)-cycloalkyl or
(D)-heterocyclyl;

Cy is

aryl or

5- or 6-membered heteroaryl;

Cy' is benzene;

D is a bond or CH_2;

M is NSO_2R_{18};

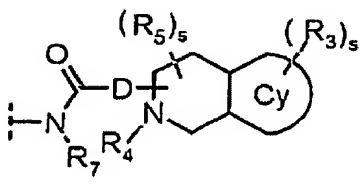
G is D;

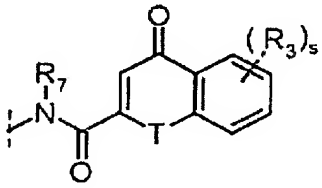
s is 0 or 1 .

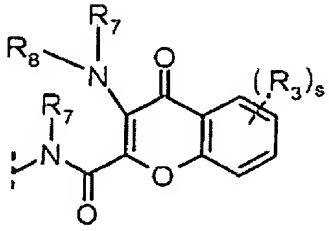
4. (Currently Amended) The compound of ~~any of claims 1 to 3~~claim 1, wherein

R_1 is (CH_2)-phenyl or (CH_2)-naphthyl which may be substituted with one to three halo atoms;

R_2 is:







R_{12} is hydrogen;

R_{13} is independently:

cyano,

nitro,

halo or

(D)-$NR_{15}COR_{15}$;

X is:

C_1 - C_4 alkyl,

C_5 - C_7 cycloalkyl,

(D)-CON($R_{17}R_{17}$) or

N-containing heterocyclyl;

Y is:

hydrogen,

C_1 - C_4 alkyl or

C_5 - C_7 cycloalkyl;

Cy is aryl;

G is CH_2.

5. (Currently Amended) ~~The compound of any of claims 1 to 4 for use as a~~ A medicament comprising the compound of claim 1.

6. (Currently Amended) ~~Use of the compound of any of claims 1 to 4 for the preparation of a medicament for the treatment or prevention~~ of A method of treating or preventing disorders, diseases or conditions responsive to the modulation of the melanocortin-4 receptor in a mammal, where modulation means activation in the case of MC4-R agonists or inactivation in the case of MC4-R antagonists, the method comprising administering to a human or mammal an effective amount of the compound of claim 1.

7. (Currently Amended) ~~Use of MC4-R antagonists according to claims 6 for the preparation of a medicament for the treatment or prevention of cancer cachexia.~~ A method of treating or preventing cancer cachexia, the method comprising administering to a human or mammal an effective amount of the MC4-R antagonists according to claim 6.

8. (Currently Amended) ~~Use of MC4-R antagonists according to claims 6 for the preparation of a medicament for the treatment or prevention of muscle wasting.~~ A method of treating or preventing muscle wasting, the method comprising administering to a human or mammal an effective amount of the MC4-R antagonists according to claim 6.

9. (Currently Amended) ~~Use of MC4-R antagonists according to claims 6 for the preparation of a medicament for the treatment or prevention of anorexia.~~ A method of treating or preventing anorexia, the method comprising administering to a human or mammal an effective amount of the MC4-R antagonists according to claim 6.

10. (Currently Amended) ~~Use of MC4-R antagonists according to claims 6 for the preparation of a medicament for the treatment or prevention of anxiety and/or depression.~~ A method of treating or preventing anxiety and/or depression, the method comprising administering to a human or mammal an effective amount of the MC4-R antagonists according to claim 6.

11. (Currently Amended) ~~Use of MC4-R agonists according to claims 6 for the preparation of a medicament for the treatment or prevention of obesity.~~ A method of treating or preventing obesity, the method comprising administering to a human or mammal an effective amount of the MC4-R antagonists according to claim 6.

12. (Currently Amended) ~~Use of MC4-R agonists according to claims 6 for the preparation of a medicament for the treatment or prevention of diabetes mellitus.~~ A method of treating or preventing diabetes mellitus, the method comprising administering to a human or mammal an effective amount of the MC4-R antagonists according to claim 6.

13. (Currently Amended) ~~Use of MC4-R agonists according to claims 6 for the preparation of a medicament for the treatment or prevention of male or female sexual dysfunction.~~ A method of treating or preventing male or female sexual dysfunction, the method comprising administering to a human or mammal an effective amount of the MC4-R antagonists according to claim 6.

14. (Currently Amended) ~~Use of MC4-R agonists according to claims 6 for the preparation of a medicament for the treatment or prevention of erectile dysfunction.~~ A method of treating or preventing erectile dysfunction, the method comprising administering to a human or mammal an effective amount of the MC4-R antagonists according to claim 6.

15. (Currently Amended) A pharmaceutical composition which comprises a compound ~~of any of claims 1 to 4~~claim 1 and a pharmaceutically acceptable carrier.